

Notice of Allowability

Application No.

09/642,744

Examiner

N. M. Minnifield

Applicant(s)

TACK ET AL.

Art Unit

1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/25/05 and 12/19/05.
2. ☒ The allowed claim(s) is/are 1, 3, 34-46, 49-51 and 53-55; now renumbered 1-21 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

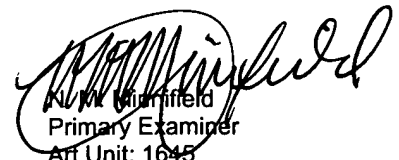
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date attached.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


N. M. Minnifield
Primary Examiner
Art Unit: 1645

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven Highlander, 37642 on December 19, 2005.

2. Applicants' amendment after final filed November 25, 2005 is acknowledged and has been entered. The attached Examiner's amendment is set forth below. Claims 2, 4-33, 47, 48 and 52 have been canceled. Claims 1 and 3 were amended. All rejections have been withdrawn in view of the amendments to the claims.

3. The application has been amended as follows:

1. (Previously amended) An isolated antimicrobial peptide of 12-37 residues, the peptide comprising one of the amino acid sequences selected from the group consisting of:

KNLRRIIRKIIHIKKYG-NH₂ (SEQ ID NO: 1),

KNIRRIIRKIIHIKKYG-NH₂ (SEQ ID NO: 6),

KNIRRIIRKIIHIKKYG (SEQ ID NO: 7),

KNLRRIIRKIIHIKKYG (SEQ ID NO: 8),

NLRRIIRKIIHIKKY (SEQ ID NO 9),

NIRRIIRKIIHIKKY (SEQ ID NO: 10),

LRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 11),
LRRIIRKIIHIIKK (SEQ ID NO: 12),
IRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13),
IRRIIRKIIHIIKK (SEQ ID NO: 14),
LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15),
RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16),
RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17),
RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21),
LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22),
LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23),
KIKEKLKKIGQKIQG (SEQ ID NO: 25),
KIKEKLKKIGQKIQGLL (SEQ ID NO: 26),
and
KNLRRRIIRKIIHIIKKYGP¹TILRIIRIIG-NH₂ (SEQ ID NO: 28).

2. (Canceled)

3. (Previously amended) A pharmaceutical composition comprising an antimicrobial peptide of 12 to 37 residues, the peptide comprising one of the amino acid sequences selected from the group consisting of:

KNLRRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 1),
KNIRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 6),
KNIRRIIRKIIHIIKKYG (SEQ ID NO: 7),
KNLRRRIIRKIIHIIKKYG (SEQ ID NO: 8),
NLRRRIIRKIIHIIKKY (SEQ ID NO 9),

NIRRIIRKIIHIIKKY (SEQ ID NO: 10),
LRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 11),
LRRIIRKIIHIIKK (SEQ ID NO: 12),
IRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13),
IRRIIRKIIHIIKK (SEQ ID NO: 14),
LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15),
RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16),
RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17),
RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21),
LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22),
LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23),
KIKEKLKKIGQKIQG (SEQ ID NO: 25),
KIKEKLKKIGQKIQGLL (SEQ ID NO: 26),

and

KNLRRRIIRKIIHIIKKYGPILRIIRIIG-NH₂ (SEQ ID NO: 28), formulated
in a pharmaceutically acceptable carrier.

4-33. (canceled)

34. (Currently amended) An isolated peptide consisting of [a] the
sequence KNLRRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 1).

35. (Previously presented) The antimicrobial peptide of claim 1,
consisting of the sequence KNIRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 6).

36. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence KNIRRIIRKIIHIIKKYG (SEQ ID NO: 7).
37. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence KNLRRRIIRKIIHIIKKYG (SEQ ID NO: 8).
38. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence NLRRIIRKIIHIIKKY (SEQ ID NO 9).
39. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence NIRRIIRKIIHIIKKY (SEQ ID NO: 10).
40. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence LRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 11).
41. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence LRRIIRKIIHIIKK (SEQ ID NO: 12).
42. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence IRRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13).
43. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence IRRRIIRKIIHIIKK (SEQ ID NO: 14).

44. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15).

45. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16).

46. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17).

47-48. (Canceled)

49. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21).

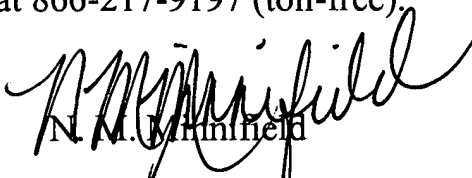
50. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22).

51. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23).

52. (Canceled)

53. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence KIKEKLKKIGQKIQG (SEQ ID NO: 25).
54. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence KIKEKLKKIGQKIQGLL (SEQ ID NO: 26).
55. (Previously presented) The antimicrobial peptide of claim 1, consisting of the sequence KNLRRIRKIIHIIKKYGPTILRIIRIIG-NH₂ (SEQ ID NO: 28).
4. Claims 1, 3, 34-46, 49-51 and 53-55 have been allowed and renumbered 1-21 respectively.
5. The drawings filed May 21, 2004 have been accepted by the Examiner.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. M. Minnifield whose telephone number is 571-272-0860. The examiner can normally be reached on M-F (8:00-5:30) Second Friday Off.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette R.F. Smith can be reached on 571-272-0864. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


N. M. Minfield
Primary Examiner
Art Unit 1645

NMM

December 19, 2005

CLEAN COPY OF ALLOWED CLAIMS

1. An isolated antimicrobial peptide of 12-37 residues, the peptide comprising one of the amino acid sequences selected from the group consisting of:

KNLRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 1),

KNIRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 6),

KNIRRIIRKIIHIIKKYG (SEQ ID NO: 7),

KNLRRIIRKIIHIIKKYG (SEQ ID NO: 8),

NLRRIIRKIIHIIKKY (SEQ ID NO 9),

NIRRIIRKIIHIIKKY (SEQ ID NO: 10),

LRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 11),

LRRIIRKIIHIIKK (SEQ ID NO: 12),

IRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13),

IRRIIRKIIHIIKK (SEQ ID NO: 14),

LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15),

RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16),

RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17),

RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21),

LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22),

LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23),

KIKEKLKKIGQKIQG (SEQ ID NO: 25),

KIKEKLKKIGQKIQGLL (SEQ ID NO: 26),

and

KNLRRIIRKIIHIIKKYGPTILRIIRIIG-NH₂ (SEQ ID NO: 28).

3. A pharmaceutical composition comprising an antimicrobial peptide of 12 to 37 residues, the peptide comprising one of the amino acid sequences selected from the group consisting of:

KNLRRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 1),
KNIRRIIRKIIHIIKKYG-NH₂ (SEQ ID NO: 6),
KNIRRIIRKIIHIIKKYG (SEQ ID NO: 7),
KNLRRRIIRKIIHIIKKYG (SEQ ID NO: 8),
NLRRIIRKIIHIIKKY (SEQ ID NO 9),
NIRRIIRKIIHIIKKY (SEQ ID NO: 10),
LRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 11),
LRRIIRKIIHIIKK (SEQ ID NO: 12),
IRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13),
IRRIIRKIIHIIKK (SEQ ID NO: 14),
LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15),
RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16),
RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17),
RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21),
LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22),
LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23),
KIKEKLKKIGQKIQG (SEQ ID NO: 25),
KIKEKLKKIGQKIQGLL (SEQ ID NO: 26),
and

KNLRRRIIRKIIHIIKKYGPTILRIIRIIG-NH₂ (SEQ ID NO: 28), formulated
in a pharmaceutically acceptable carrier.

34. An isolated peptide consisting of the sequence KNLRRIRKIIHIKKYG-NH₂ (SEQ ID NO: 1).
35. The antimicrobial peptide of claim 1, consisting of the sequence KNIRRIIRKIIHIKKYG-NH₂ (SEQ ID NO: 6).
36. The antimicrobial peptide of claim 1, consisting of the sequence KNIRRIIRKIIHIKKYG (SEQ ID NO: 7).
37. The antimicrobial peptide of claim 1, consisting of the sequence KNLRRIRKIIHIKKYG (SEQ ID NO: 8).
38. The antimicrobial peptide of claim 1, consisting of the sequence NLRRIIRKIIHIKKY (SEQ ID NO 9).
39. The antimicrobial peptide of claim 1, consisting of the sequence NIRRIIRKIIHIKKY (SEQ ID NO: 10).
40. The antimicrobial peptide of claim 1, consisting of the sequence LRRIIRKIIHIKK-NH₂ (SEQ ID NO: 11).
41. The antimicrobial peptide of claim 1, consisting of the sequence LRRIIRKIIHIKK (SEQ ID NO: 12).

42. The antimicrobial peptide of claim 1, consisting of the sequence
IRRIIRKIIHIIKK-NH₂ (SEQ ID NO: 13).

43. The antimicrobial peptide of claim 1, consisting of the sequence
IRRIIRKIIHIIKK (SEQ ID NO: 14).

44. The antimicrobial peptide of claim 1, consisting of the sequence
LRRIIRKIIHIIK-NH₂ (SEQ ID NO: 15).

45. The antimicrobial peptide of claim 1, consisting of the sequence
RRIIRKIIHIIKK-NH₂ (SEQ ID NO: 16).

46. The antimicrobial peptide of claim 1, consisting of the sequence
RRIIRKIIHIIK-NH₂ (SEQ ID NO: 17).

49. The antimicrobial peptide of claim 1, consisting of the sequence
RKRLRKFRNKIKEKLKKIGQKI (SEQ ID NO: 21).

50. The antimicrobial peptide of claim 1, consisting of the sequence
LRKFRNKIKEKLKKIGQKI (SEQ ID NO: 22).

51. The antimicrobial peptide of claim 1, consisting of the sequence
LRKFRNKIKEKLKKIGQKIQG (SEQ ID NO: 23).

53. The antimicrobial peptide of claim 1, consisting of the sequence
KIKEKLKKIGQKIQG (SEQ ID NO: 25).

54. The antimicrobial peptide of claim 1, consisting of the sequence
KIKEKLKKIGQKIQGLL (SEQ ID NO: 26).

55. The antimicrobial peptide of claim 1, consisting of the sequence
KNLRRRIIRKIIHIIKKYGPTILRIIRIIG-NH₂ (SEQ ID NO: 28).